Filter Strip (ACRE)
Code 393

Montana Conservation Practice Job Sheet

DEFINITION

Filter strips are areas of herbaceous vegetation situated where environmentally sensitive areas need to be protected from sediment, other suspended solids and dissolved contaminants in overland flow. Sensitive areas include streams, lakes, wetlands, irrigation ditches, and other water bodies and areas susceptible to damage by water-borne pollutants.

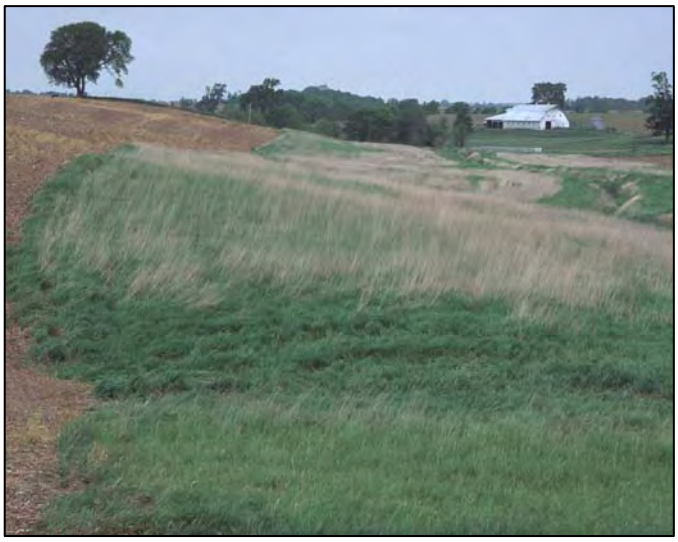
PURPOSE

Filter strips function by 1) reducing suspended solids and associated contaminants in runoff; 2) reducing dissolved contaminant loadings in runoff; 3) reducing suspended solids and associated contaminants in irrigation Tailwater. Establishing filter strips are also significant to wildlife and beneficial insects by restoring, creating, or enhancing herbaceous habitat. The use of filter strip systems will enhance watershed functions and values. Where properly placed, filter strips will reduce excess nutrients found in subsurface water flow.

WHERE USED

Filter strips can be used on any land use or disturbed area where environmentally sensitive areas need to be protected.

Multiple filter strips can be strategically located in a watershed to reduce and slow runoff and increase infiltration and groundwater recharge. A filter strip is designated as a vegetated area to treat runoff and is not part of the adjacent cropland rotation. A strip is designed to filter surface sheet flow. Concentrated flows need to be dispersed before water enters a strip. A filter strip is typically positioned at the down-slope edge of a field or disturbed area.



Filter strips are normally only used when adjacent and up-gradient areas have slopes gradients between 1 and 10 percent. To the extent practical, an individual filter strip is placed on the approximate contour. When establishing a filter strip, use vegetation that is tolerant to herbicides used in the adjacent crop rotation.

RESOURCE MANAGEMENT SYSTEM

Filter strips are normally established concurrently with other practices as part of a resource management system for a conservation management unit. Filter strips are installed directly below areas where sheet and rill erosion have been reduced to an acceptable level and where other practices are in place that slow runoff and contaminant delivery. A filter strip is influenced by, but is not considered part of the adjacent crop rotation.

WILDLIFE

Filter strips can enhance wildlife objectives, depending on the vegetative species used and management practiced. Using native or adapted vegetative species can improve the wildlife values of a filter strip area as well as biodiversity. Avoid mowing during nesting periods.

OPERATION AND MAINTENANCE

Maintain original width and length of the filter strip. Mow filter strips (and harvest if possible) as necessary to encourage dense vegetative growth. If established for wildlife habitat, avoid mowing during the nesting period of ground-nesting wildlife. Control undesirable weed species. Inspect and repair after storm events to fill in gullies, remove flow-disrupting sediment accumulation, re-seed disturbed areas, and take other measures to prevent concentrated flow into and across the filter strip. Fertilize to soil test recommendations to maintain a vigorous stand. Exclude livestock and vehicular traffic from filter strips during wet periods of the year to reduce compaction that will limit infiltration. This type of traffic should be excluded at all times to the extent practical. Restoration is required if the filter strip has accumulated sediment to a point that it no longer functions effectively.

SPECIFICATIONS

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered in this job sheet. This job sheet is prepared in accordance with the NRCS Field Office Technical Guide (see FOTG, Section IV, Practice Standards and Specifications, Filter Strip (Code 393).

NRCS, MT
December 2008

Go to Link: http://efotg.nrcs.usda.gov/references/public/MT/393_JobSheet_Dec_2008.xls to retrieve excel worksheet

NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE JOB SHEET

FILTER STRIPS (ACRE)

CODE 393

Cooperator _____ Date _____

Tract/Field _____ Job Class _____

Purpose for planning and applying this practice (check all that apply)

- □ Reduce suspended solids and associated contaminates (perennial vegetation => 20' wide)
- □ Reduce dissolved contaminate loadings (perennial vegetation => 30' wide)
- □ Reduce suspended solids and associated contaminates in irrigation tailwater (annual vegetation => 20' wide)
- □ Restore, create, or enhance herbaceous habitat for wildlife and beneficial insects (=>20' wide)

Perennial Vegetation Layout	Strip 1	Strip 2	Strip 3
Filter strip width, or flow path (feet)			
Filter strip length (feet)			
Filter strip gradient, upper edge (percent)			
Contributing area (acres)			
Contributing area slope (percent)			
Sediment delivery to filter strip (tons/acre/year)*			
Sediment delivery from filter strip (tons/acre/year)*			
Filter strip area (acres)			
Contributing area to filter strip area ratio			
Sediment trapping efficiency (percent)			
Filter strip life span (years to accumulate 6 inches of sediment)			

Annual Vegetation Layout	Strip 1	Strip 2	Strip 3
Filter strip width, or flow path (feet)			
Filter strip length (feet)			
Filter strip gradient, upper edge (percent)			
Contributing area slope (percent)			
Filter strip area (acres)			

*Revised Universal Soil Loss Equation, Version 2 (RUSLE2) data.

Plant Materials (species/cultivars)		Seeding Rate (lbs/acre PLS)	Seeding Date
Strip 1:			
Strip 2:			
Strip 3:			

Site Preparation

Prepare a firm seedbed that is weed-free, clod-free, firm and moist (firm is a foot print no deeper than 1/8"). Apply fertilizer according to soil test recommendations. Additional requirements:

Planting Methods

Refer to Plant Materials Technical Note MT-58 for Seedbed preparation and seeding guidelines. Drill grass and legume seed_____inches deep uniformly over the entire area. Establish vegetation according to the specified seeding rate. If necessary, mulch newly seeded area with_____tons per acre of mulch material. A small grain crop may be used as a companion crop at the rate of_____pounds per acre (clip and harvest before it heads out). Additional requirements:

Operation and Maintenance

Maintain original width and length of the filter strip. Mow filter strips (and harvest if possible) as necessary to encourage dense vegetative growth. If established for wildlife habitat, avoid mowing during the nesting period for ground-nesting wildlife. Control undesirable weed species. Inspect and repair after storm events to fill in gullies, remove flow-disrupting sediment accumulation, re-seed disturbed areas, and take other measures to prevent concentrated flow into and across the filter strip. Fertilize according to soil test recommendations to maintain a vigorous stand. Exclude livestock and vehicular traffic from filter strips during wet periods of the year to reduce compaction that will limit infiltration. This type of traffic should be excluded at all times to the extent practical. Restoration is required if the filter strip has accumulated sediment to a point that it no longer functions.

Approval:

_____ _____

Producer Date

_____ _____ _____

NRCS Conservationist Job Approval Authority Date

CERTIFICATION STATEMENT:

I certify that this practice has been installed in accordance with NRCS standards and specifications.

_____ _____ _____

Planner Job Approval Authority Date

_____ _____

Producer Date